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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,643	01/20/2004	Paul Sandefer	J1044-20011	1020
3000	7590	07/23/2004	EXAMINER	
CAESAR, RIVISE, BERNSTEIN, COHEN & POKOTILOW, LTD. 11TH FLOOR, SEVEN PENN CENTER PHILADELPHIA, PA 19103-2212			DEL SOLE, JOSEPH S	
			ART UNIT	PAPER NUMBER
			1722	

DATE MAILED: 07/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/760,643	SANDEFER ET AL. <i>EB</i>
	Examiner Joseph S. Del Sole	Art Unit 1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-5, 7, 8, 14, 19-26, 28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-5, 7, 8, 14, 19-26, 28 and 29 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>1/20/04</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: **a)** on page 6, line 10 "5,582,89" (stein et al.) must be changed to --5,582,789--; and **b)** the abstract currently refers to both a method and apparatus, however since only apparatus is claimed the reference to the method in the abstract should be deleted.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-5, 7-8, 14, 19-26 and 28-29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation "said inlet of a configuration capable of introducing only solid, partially expanded resin" is new matter because the original disclosure does not structurally set forth an inlet designed such that it can only introduce "solid, partially expanded resin". While the original disclosure does set forth an inlet for introducing solid, partially expanded resin, it is not inherent that such an inlet in a steam chest mold is incapable of introducing resin in any other state and is incapable of introducing any material other than resin. The affidavit of

Paul Sandefer submitted 2/18/04 does not indicate that an inlet of a steam chest mold is capable of introducing nothing but "solid, partially expanded resin".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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7. Claims 1-5, 7-8, 14, 20-22 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over D'Hooren (6,096,251) in view of Masters (5,034,167).

D'Hooren teaches a mold apparatus for forming a multilayered object, the apparatus having a male mold half matable to a female mold half which open and close with respect to one another to define a mold cavity (Fig 5); an inlet mounted on the mold apparatus and capable of introducing solid, partially expanded resin (Fig 1B, #6); a plurality of edge folding members (Fig 3, #15) carried by one of the mold halves, movable from a retracted position to an extended position (Figs 2-5), the edge folding members adapted to fold a layer over at least part of the edge of a second layer; a plurality of trim blades (Fig 4, #25), located adjacent the edge folding members inwardly of the cavity, each of the trim blades being sequentially movable by one of a plurality of trim blade actuators (Figs 4-5), from a retracted position adjacent the cavity to an extended position engaging the other mold half to sever the first layer to define the finished shape, and back to the retracted position (Figs 2-5); at least one driver for opening and closing the mold halves and for moving the edge folding members from the retracted position to the extended position (col 4, lines 1-6); each of the plurality of trim blades is movably mounted on one of the plurality of edge folding members (Fig 2); each of the plurality of edge folding members is inwardly movable by an edge folding actuator (Fig 2, #17); the edge folding members are pneumatically operated (col 2, lines 40-44); each of the plurality of edge folding members are inwardly movable by a camming action of a camming surface on each of a plurality of heel blocks located on one of the mold halves, against a camming surface on each of the plurality of

corresponding edge folding members on another of said mold halves, whereby the movement of each of the plurality of edge folding members caused by the camming action causes the folding of the cladding layer of the foam backing layer (col 4, lines 58-64); each edge folding member is slidably mounted on one of the mold halves, such that closing of the mold halves with respect to one another causes the camming surfaces on the heel blocks and the camming surfaces on the edge folding members to engage to move the edge folding members upon mold closure (col 4, lines 58-64); each of the plurality of heel blocks is located on the male mold half whereby movement of the male mold half into the female mold half causes the camming action to move the edge folding member to slide inwardly to fold the first layer over the second layer; the at least one driver is mechanical; the male mold half and the female mold half are oriented with their openings substantially in an horizontal plane (Figs 2-5); an apparatus to partially close the male and female mold halves with respect to one another (Fig 3); and an apparatus to subsequently finish the closing motion (Fig 5); each of the plurality of trim blades are matable against a cutting surface; and retainers (the combination of the edge of #3 and #25) to receive a layer of material that fully or partially covers a surface of a second material.

D'Hooren fails to teach the male and female mold halves being steam chest mold halves; and an inlet for introducing nonliquid foamed materials into the mold cavity, the inlet capable of introducing only solid, partially expanded resin.

Masters teaches a steam chest mold apparatus (Figure 1) having male and female steam chest mold halves (Fig 1, #s 28A and 28B) and an inlet (Fig 1, #22 and

col 2, lines 45-68) for introducing nonliquid foamed materials into the mold cavity, the inlet capable of introducing only solid, partially expanded resin (the Examiner notes that without further disclosure, the inlet of Masters is capable of only introducing solid, partially expanded resin because the inlet is only connected to a hopper providing such resin) for the purpose of forming a product out of a polystyrene foam article (col 1, line 67 - col 2, line 25),

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of D'Hooren with the mold halves being steam chest mold halves and an inlet for introducing nonliquid foamed materials as taught by Masters because it enables the multilayered product to be partially composed of a polystyrene foam article.

8. Claims 19 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over D'Hooren (6,096,251) and Masters (5,034,167) in view of Bullard et al (4,801,361).

D'Hooren and Masters teach the apparatus as discussed above.

D'Hooren fails to teach the male mold half and the female mold half being oriented with their openings substantially in a vertical plane and fails to teach the driver including a hydraulic cylinder for opening and closing the mold halves and a plurality of hydraulic cylinders for moving the trim blades.

Bullard teaches male and female mold halves oriented with their openings substantially in a vertical plane for the purpose of allowing easy access to the mold halves (Fig 1 and col 5, line 66 - col 6, line 3) and teaches a hydraulic cylinder (Fig 2, #52 and #53) for opening and closing mold halves for the purpose of enabling control of

the opening and closing with a control box connected to the hydraulic cylinders (col 10, lines 24-25).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of D'Hooren with the mold halves oriented with their openings in a vertical plane as taught by Bullard because it enables easier access to the molds, such easier access would increase the safety to those accessing the mold and to have modified the invention of D'Hooren with a hydraulic cylinder as taught by Bullard because it enables automatic control of the opening and closing function.

Further regarding claim 26, using hydraulic cylinders for moving the trim blades would have been obvious because the provision of automatic controls is an obvious expedient (as discussed above, Bullard teaches utilizing hydraulic cylinders for automatic control) and because automatic control increases the efficiency and decreases the cost of a process. See *In re Venner et al*, 120 USPQ 192.

9. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over D'Hooren (6,096,251) in view of Masters (5,034,167).

D'Hooren and Masters teach the apparatus as discussed above.

D'Hooren fails to teach the cutting surface constructed of a heat resistant resin or metal selected from the group consisting essentially of polypropylene, nylon, polyurethane, aluminum and stainless steel; the plurality of trim blades including at least four trim blades carried by one of the mold halves; or the driver including a hydraulic

cylinder for opening and closing the mold halves and a plurality of hydraulic cylinders for moving the trim blades.

Regarding claims 23 and 24, the use of polypropylene, nylon, polyurethane, aluminum or stainless steel as the material of which the cutting surface is made, the selection being on the basis of suitability for the intended use, would be readily determined by routine experimentation in an effort to produce the optimum results absent a showing of unexpected results. Under some circumstances, however, the selection of one of the above materials may impart patentability to an apparatus if the material claimed produces a new and unexpected result which is different in kind and not merely in degree from the results of the prior art. Further regarding said material, column 5, line 59 of D'Hooren describes cutting surface #28 as an anvil and the sole definition of "anvil" in the Merriam Webster Collegiate Dictionary, 10th ed. is "a heavy usu. steel faced iron block on which metal is shaped"; this definition makes the selection of aluminum or stainless steel an obvious selection for the material of cutting surface #28.

Regarding claim 25, the mere duplication of parts, in this case using at least four trim blades has no patentable significance unless new and unexpected results are produced. In re Harza, 124 USPQ 378 (CCPA 1960). As to the numerical requirements of the instant claims, i.e. "said plurality of trim blades includes at least four trim blades", the specification contains no disclosure of either the critical nature of these requirements or any unexpected results arising therefrom, and as such these

requirements would be arbitrary and therefore obvious. Applicants must show that these requirements are critical. *In re Woodruff*, 16 USPQ 2d 1934.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of D'Hooren by using polypropylene, nylon, polyurethane, aluminum or stainless steel as the material of which the cutting surface is made because such materials can be easily and cheaply manufactured and replaced, and to have modified the invention of D'Hooren by using additional trim blades because it enables a greater specificity of trimming.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1 and 5 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,695,998 in view of Masters (5,034,167).

Claim 1 of US6,695,998 teaches a mold apparatus for forming a multilayered object, the apparatus having a male mold half matable to a female mold half which open

and close with respect to one another to define a mold cavity; an inlet mounted on the mold apparatus and capable of introducing solid, partially expanded resin; a plurality of edge folding members carried by one of the mold halves, movable from a retracted position to an extended position, the edge folding members adapted to fold a layer over at least part of the edge of a second layer; a plurality of trim blades, located adjacent the edge folding members inwardly of the cavity, each of the trim blades being sequentially movable by one of a plurality of trim blade actuators, from a retracted position adjacent the cavity to an extended position engaging the other mold half to sever the first layer to define the finished shape, and back to the retracted position; at least one driver for opening and closing the mold halves and for moving the edge folding members from the retracted position to the extended position; each of the plurality of edge folding members are inwardly movable by a camming action of a camming surface on each of a plurality of heel blocks located on one of the mold halves, against a camming surface on each of the plurality of corresponding edge folding members on another of said mold halves, whereby the movement of each of the plurality of edge folding members caused by the camming action causes the folding of the cladding layer of the foam backing layer.

Claim 1 of US6,695,998 fails to teach the male and female mold halves being steam chest mold halves and fails to teach the inlet for introducing nonliquid foamed materials, the inlet of a configuration capable of introducing only solid, partially expanded resin.

Masters teaches a steam chest mold apparatus (Figure 1) having male and female steam chest mold halves (Fig 1, #s 28A and 28B) and an inlet (Fig 1, #22 and col 2, lines 45-68) for introducing nonliquid foamed materials into the mold cavity, the inlet capable of introducing only solid, partially expanded resin (the Examiner notes that without further disclosure, the inlet of Masters is capable of only introducing solid, partially expanded resin because the inlet is only connected to a hopper providing such resin) for the purpose of forming a product out of a polystyrene foam article (col 1, line 67 - co 1 2, line25),

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of claim 1 of US6,695,998 with the mold halves being steam chest mold halves and an inlet for introducing nonliquid foamed materials as taught by Masters because it enables the shaped laminate to have polystyrene foam as its foam backing layer.

Response to Arguments

12. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

The Applicant presented arguments prior to a first Office action, however the above new Office action makes moot and/or addresses the Applicant's arguments.

Correspondence

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joseph S. Del Sole whose telephone number is (571) 272-1130. The examiner can normally be reached on Monday through Friday from 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Wanda Walker, can be reached at (571) 272-1151. The official fax

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phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for both non-after finals and for after finals.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from the either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

Joseph S. Del Sol

J.S.D.

July 21, 2004